

Claims

1. A structure comprising:
a plurality of constructional modules being of a predetermined configuration;
one or more conditioning elements being arranged to cooperate with the
5 constructional modules wherein adjacent of said modules engage one another to form the
structure; and
one or more packer elements being adapted to locate between adjacent of the
constructional modules to effect reconfiguration of the structure.
2. A structure as defined in claim 1 wherein the conditioning elements include an
10 upper tendon and a lower tendon being arranged to cooperate with an upper chord member
and a lower chord member, respectively, of each of the constructional modules.
3. A structure as defined in claim 2 wherein the respective tendons are designed to
locate within a hollow section of the lower and upper chord members and stressing of the
tendons involves pre-stressing or post tensioning of the tendons and the corresponding
15 chord member.
4. A structure as defined in any one of the preceding claims wherein the
constructional module is shaped in the form of a trapezium including the upper and lower
chord members being substantially parallel and interconnected at opposite ends with
respective web members.
- 20 5. A structure as defined in claim 4 wherein each of the constructional modules is of a
substantially identical shape.
6. A structure as defined in either of claims 4 or 5 wherein the chord and web
members are formed as hollow section members.
7. A structure as defined in claim 6 wherein the hollow section members are square
25 hollow section (SHS) members.
8. A structure as defined in any one of claims 4 to 7 wherein the trapezium-shaped
constructional module includes a pair of diagonal web members arranged to add rigidity to
the module.

9. A structure as defined in any one of the preceding claims wherein the constructional module includes interlocking means being arranged to provide interlocking of the adjacent modules.
10. A structure as defined in claim 9 wherein the interlocking means includes an integral spigot being adapted to engage a hole of an adjacent module, or *vice versa*, and designed to permit pivotal movement between adjacent of said modules.
11. A structure as defined in claim 10 wherein the spigot or hole allows a hinged action between said adjacent modules.
12. A constructional module or a structure as defined in either of claims 10 or 11 wherein the spigot and/or hole together with the surrounding portion of the constructional module is reinforced.
13. A structure as defined in any one of the preceding claims wherein the constructional modules are of a composite construction.
14. A structure as defined in claim 13 wherein the composite constructional modules are fabricated from a fibre composite material.
15. A structure as defined in claim 14 wherein the fibre composite material is a particulate filled resin material with high strengths fibre reinforcement, or a polyester resin based material.
16. A constructional module or a structure as defined in any one of the claims 1 to 12 wherein the constructional module is formed from a polymeric material.
17. A constructional module or a structure as defined in claim 16 wherein the polymeric material is pultruded.
18. A structure as defined in any one of the preceding claims wherein each of the constructional modules is a truss module.
19. A structure as defined in any one of the preceding claims wherein the structure is a building structure.

20. A structure as defined in claim 19 wherein the building structure is a roof truss clad with elongate and transversely oriented sheeting.
21. A structure as defined in claim 20 wherein the sheeting is of a channel section and fabricated of a rigid material.
- 5 22. A structure as defined in claim 20 wherein the cladding is made from a fabric.
23. A structure as defined in any one of the preceding claims wherein the structure is redeployable.
24. A method of construction, said method including the steps of:
providing a plurality of constructional modules each being of a predetermined
10 configuration, one or more conditioning elements being arranged to cooperate with said modules, and one or more packer elements being adapted to locate between adjacent of the constructional modules;
locating the modules adjacent one another and positioning the conditioning elements to permit engagement of said adjacent modules;
- 15 deploying the conditioning elements wherein the modules are together configured to form a structure, the packer elements being arranged to effect reconfiguration of the structure.
25. A method as defined in claim 24 wherein the reconfiguration step is effected prior to deployment of the conditioning elements.
- 20 26. A method as defined in either of claims 24 or 25 wherein the conditioning elements are each in the form of tendons and the step of deploying the conditioning elements involves stressing of the tendons.
27. A method as defined in claim 26 wherein stressing of the tendons involves pre-stressing or post tensioning of the tendons which effects deployment of the structure.
- 25 28. A method as defined in either of claims 26 or 27 wherein the structure is a roof truss and stressing of the tendons provides erection of the roof truss.